

Health Consultation

Review of the Remedial Design Work Plan,
Pre Design Investigation Sampling and Analysis Plan,
and the Health and Safety Plan

WINGATE ROAD MUNICIPAL INCINERATOR DUMP
FORT LAUDERDALE, BROWARD COUNTY, FLORIDA

CERCLIS NO. FLD981021470

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Agency for Toxic Substances and Disease Registry

Division of Health Assessment and Consultation

Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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Prepared by:

Florida Department of Health
Bureau of Environmental Toxicology
Under Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

Background and Statement of Issues

The Florida Department of Health (FDOH), through a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR) in Atlanta, Georgia, evaluates the public health significance of hazardous waste sites in Florida. On December 28, 1998, the United States Environmental Protection Agency (EPA) requested that (FDOH) review and comment on the Remedial Design Work Plan, the Sampling and Analysis Plan, and Health and Safety Plan for Wingate Road Municipal Incinerator and Landfill Site (Wingate). FDOH has determined that a health consultation is an appropriate response to evaluate the proposed work plans. The interpretation, advice, and recommendations presented in this report are site-specific and should not be considered applicable to any other site.

The Wingate Road site is located at 1300 NW 31st Avenue, Fort Lauderdale, Broward County, Florida (Figure 1). The site is bordered to the west by NW 31st Avenue, to the north by a privately owned junkyard, to the northeast by a privately owned lake known as Rock Pit Lake, and to the east and south by residential properties (figure 2). The site is approximately 60 acres in size and includes two inactive incinerator buildings, cooling water treatment structures, an ash and municipal solid waste landfill, a vehicle maintenance area, and various buildings. The study area also includes the cooling water percolation pond, known as Lake Stupid, and Rock Pit Lake, which historically received overflow from Lake Stupid. The site is owned and was operated by the City of Fort Lauderdale. The incinerator was in operation from 1954 through June 1978.

Since 1985, EPA has conducted multi-phased investigation to characterize potential pollutant sources, release mechanisms, and migration pathways. Based on a site inspection and Hazard Ranking System score, EPA placed the site in the National Priorities List (NPL) in 1990. The City of Fort Lauderdale conducted a Remedial Investigation and Feasibility Study and found that remedial action is necessary to address the potential human health risks posed by the site.

EPA has described the selected remedy for the Wingate Road site in the Record of Decision. Briefly, the remedy includes:

- construction of a geomembrane cap with erosion controls over the landfill;
- removal of highly contaminated ash/soil for the old incinerator with on-site or off-site disposal at an approved facility;
- excavation of contaminated soil and incinerator ash, and disposal in the on-site landfill;
- drainage, treatment, and disposal of water in Lake Stupid;
- excavation on Lake Stupid sediments, and disposal of the on-site landfill;
- stormwater management;
- construction of a barrier between the landfill and Rock Pit Lake;
- natural attenuation for the surface water at Rock Pit Lake;
- decontamination or demolition of the buildings and structures;

- groundwater, surface-water, sediment, and fish tissue monitoring;
- institutional controls and/or groundwater use restrictions within the current site boundary; and
- institutional controls for the maintenance of the site cap, stormwater controls, fencing, and signs.

FDOH has reviewed the Remedial Design Work Plan, Pre-design Investigation Sampling and Analysis Plan, and the Health and Safety Plan for the Wingate site. GeoSyntec Consultants (GeoSyntec) prepared all three plans.

Discussion

Much of the work described in these plans is for pre-design investigation only. Many of our comments, however, are geared towards actual cleanup activities. We believe that our comments and concerns should be considered now to provide EPA support in its decision making process for the final design and implementation plan for the site.

The Wingate facility is located in a residential neighborhood. There are some areas of the landfill and process area that abut directly to residential yards. Because of the close proximity to residents and the contaminants known or suspected to be present at the site, we believe that precautionary measures with regard to waste containment, demolition of structures, dust control, and air monitoring are paramount to the protection of nearby residents and site workers.

The following are our comments regarding the Remedial Design Work Plan:

1. The legend on Figure No. 2-2 is confusing. The Sludge Bed (7) in the legend looks like the Central Settling Basin (8) in the figure. The same problem exists for the New Incinerator (13) and the East Settling Basin (14). Either the legend or the study area map should be changed.
2. Section 3. Description of USEPA Selected Remedy, page 3-1. - We have concerns regarding the implementation of a number of the Remedy Components listed in section 3.1. Specifically, our concerns are regarding containment of dust (and pollutants) and air monitoring during remedial action activities for final closure. We believe that there should be a separate comprehensive dust suppression/control and air monitoring plan that addresses:
 - the pre-design investigation;
 - removal of highly contaminated ash/soil from the old incinerator;

- excavation of contaminated soil and incinerator ash and disposal in the on-site landfill;
 - construction of a barrier between the landfill and Rock Pit Lake;
 - decontamination and/or demolition of the buildings and structures; and
 - if dry conditions prevail, the excavation of Lake Stupid sediments and on-site disposal.
3. Section 3.10, Building Demolition, page 3-5. - We have noted that the on-site structures may contain asbestos-containing material (ACMs), lead-based paints (LBPs), and polychlorinated biphenyls (PCBs). We recommend that the levels of these contaminants be scrutinized to determine if they should also be included in an air monitoring plan during the demolition of the structures.
 4. Section 4.3.3.2, Remedial Design Planning, page 4-6. - We believe that a comprehensive dust control/air-monitoring plan should be developed for all site activities. This plan should be part of the Remedial Design Planning (see comment 2).
 5. Section 4.4.4, Excavation of Ash, Soil, and Sediment, page 4-15. - These activities have great potential to cause problems for the nearby residents. The proposed technical approach requires that 2 feet of ash, soil, and/or sediment be removed to the property boundary. This means that excavation of soils may occur right up to someone's backyard. More information regarding the type of mitigation measures that will be in place and prevent workers and residents from exposure to on-site contaminants and dust is needed (see comment 2).
 6. Section 4.4.5, Construction of Barrier Adjacent to Rock Pit Lake, page 4-16, - See comment no. 2.
 7. We have a concern that contaminated soils might be transported off-site by vehicles exiting the site. As work progresses, there will be a greater number of vehicles entering and exiting the site on a daily basis. Although it would be difficult to quantify, it is possible that dust and contaminated soil could be transported into the community by vehicles via tires. Consider having a tire or vehicle wash station installed at the site.

The following are our comments regarding the Pre-Design Investigation and Sampling and Analysis Plan:

1. Section A.2.5.5 Investigation Derived Waste Management, page A-18, - Portions of the vegetation that is removed for soil or ash sampling should be considered IDW. Uprooted vegetation may have large quantities of ash or contaminated soil adhering to the root system.

2. We noted that Figure A-1 Proposed Sampling Locations, does not include the locations for ACMs, LBPs, or PCBs. Perhaps that should be noted on the figure.

The following are our comments regarding the Health and Safety Plan:

1. Section 2.5, Site Health and Safety Officer, page 5. – The plan makes reference to an imminent danger to the health and safety of site workers or the public. Examples of imminent dangers that could occur on this site should be listed for the readers of the safety plan.
2. Section 2.6, Subcontractors, - More information is needed on who reviews and approves the health and safety plans of subcontractors.
3. Sections 4.3.3, Subsurface Investigation, page 11. - The plan states that dusty conditions may be generated and that monitoring for the presence of airborne particles (dust) will be necessary, but there is no reference to any standard or action level concentration for dust in this section. We did note in section 7, page 16, that respirators are required if the PDM-3 Miniram reads above 0.5 mg/m³. At what levels will sampling stop because dust is blowing off-site to residences near by. Also, the 0.5 mg/m³ standard should be listed in Section 10 as well.
4. Section 12.5, Emergency Contact/Notification System, page 26. - The Broward County Health Department should also be a contact agency.
5. Sections 15, Visitors, page 30. – More information is needed about preventing the public from entering the site.
6. Table 1, Tables page 1.
How were the Range of Detected Concentrations for Surface Soil/Ash Residue and Sediment determined? The units, mg/m³, indicate concentrations in air. Are these units correct? We question if it is appropriate to compare contaminate concentrations in soil, sediment, and water to PEL and TLV exposure limits.
7. Table 2, Tables page 2.
A contact person and phone number from the Broward County Health Department should be included.

Conclusion

Many of the activities outlined in EPA's selected remedy for the Wingate site have the potential to generate large amounts of dust and could, potentially, expose workers and nearby residents to air-borne contaminants. The exposures could result in potential adverse health effects. We find that the documents do not adequately plan for or address dust and air-borne pollutant migration. Though the RAWP is preliminary in nature, nonetheless, preparation should be beginning at this planning stage for a comprehensive dust control management and air-monitoring plan. The Health and Safety Plan needs to consider the hazards of handling vegetation removed from the existing landfill cover soil. The Health and Safety Plan needs to address references to imminent dangers, who approves subcontractors health and safety plans, the definition of dusty conditions, and local emergency contacts.

Recommendations

1. A comprehensive air monitoring plan should be developed that includes air monitoring at facility boundaries and nearby residences for contaminants identified above performance standards/action levels listed in Table 3-1 of the RDWP for soil, ash, and sediments. We suggest the air monitoring plan include, at a minimum, metals, dioxin, and insecticides.
2. Performance standards/action levels for chemical concentrations in the air should be defined by residential exposure safety standards.
3. The plan should be designed to greatly reduce dust generation and exposure, and verify, through an air monitoring program, that public health has been protected.
4. The detailed comments and concerns raised in the discussion section of this document should also be given due consideration.

Documents Reviewed

GeoSyntec Consultants. Remedial Design Work Plan, Wingate Road Municipal Incinerator and Landfill Site, Fort Lauderdale, Broward County Florida, Project Number FL0163, December 1998.

GeoSyntec Consultants. Appendix A Pre-design Investigation Sampling and Analysis Plan, Wingate Road Municipal Incinerator and Landfill Site, Fort Lauderdale, Broward County Florida, Project Number FL0163, December 1998.

GeoSyntec Consultants. Health and Safety Plan, Wingate Road Municipal Incinerator and Landfill Site, Fort Lauderdale, Broward County Florida, Project Number FL0163, December 1998.

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CERTIFICATION

This Wingate Road Incinerator and Landfill Health Consultation was prepared by the Florida Department of Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the public health assessment was begun.

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The Division of Health Assessment and Consultation, ATSDR, has reviewed this public health assessment, and concurs with its findings.

Richard Gillig

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